

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P312615

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-RDP-CA08-W2A-U-3000K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P312615
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L83050-RDP-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 3000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1388.0 lumens
Efficiency: N/A
Efficacy: 73.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

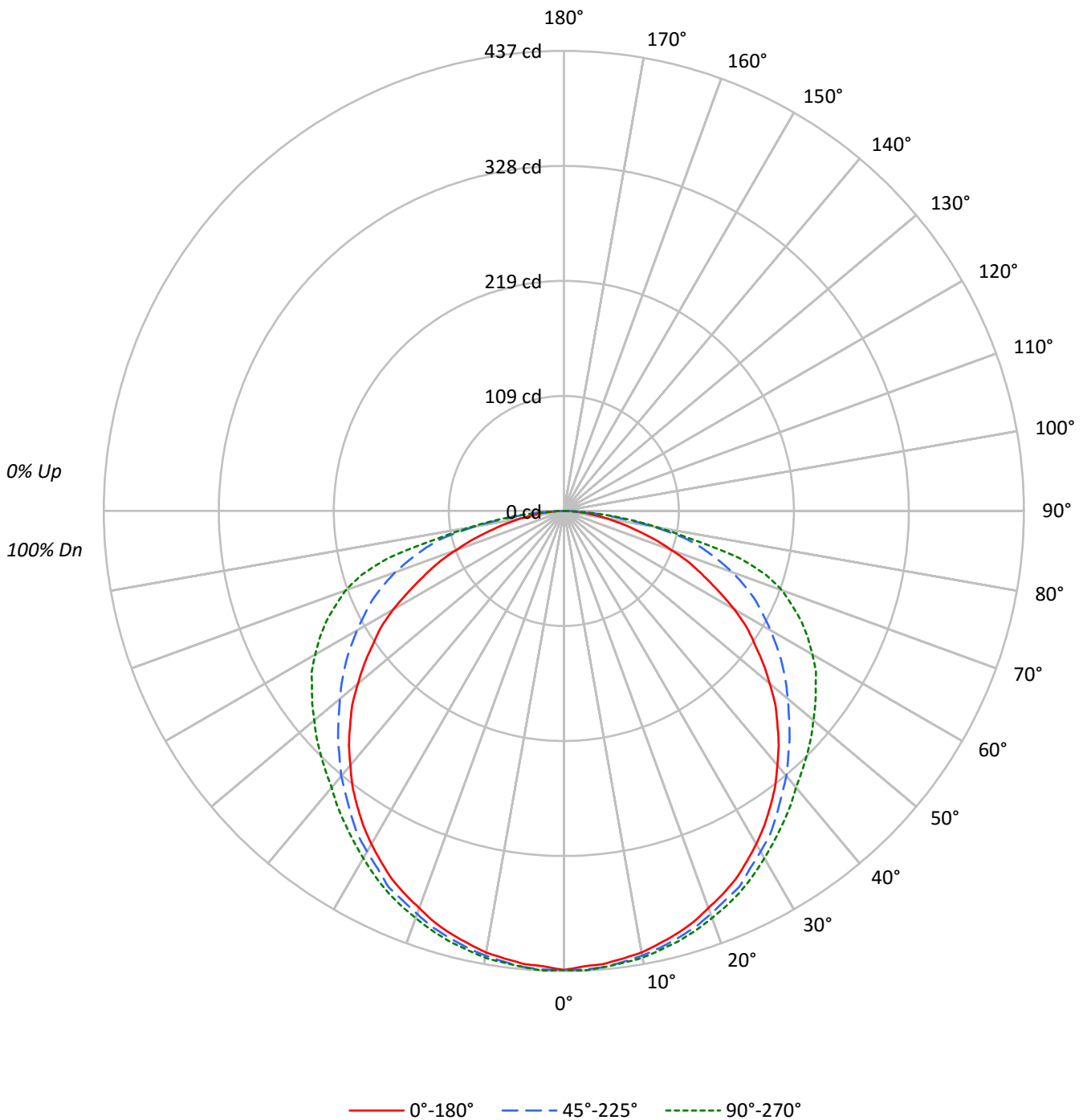
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1173	1173	1173
5°	1167	1175	1175
10°	1163	1172	1177
15°	1158	1169	1178
20°	1149	1167	1178
25°	1146	1170	1182
30°	1136	1161	1184
35°	1124	1157	1191
40°	1108	1155	1205
45°	1092	1154	1243
50°	1069	1163	1295
55°	1040	1188	1370
60°	1006	1220	1467
65°	936	1280	1586
70°	860	1341	1736
75°	754	1412	1795
80°	649	1345	1409
85°	568	979	1071



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.2	3.0
10°-20°	118.4	8.5
20°-30°	180.7	13.0
30°-40°	220.6	15.9
40°-50°	235.9	17.0
50°-60°	227.7	16.4
60°-70°	196.0	14.1
70°-80°	132.6	9.6
80°-90°	35.0	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	340.3	24.5
0°-40°	560.9	40.4
0°-60°	1024.5	73.8
0°-90°	1388.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1388.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	436	436	436	436	436	
5°	432	433	435	435	435	41
15°	416	417	420	422	423	117
25°	386	388	394	396	398	178
35°	342	345	352	359	362	214
45°	287	292	303	319	327	221
55°	222	229	253	279	292	199
65°	147	161	201	233	249	146
75°	72	96	136	163	173	78
85°	18	26	32	33	35	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	436.0	436.0	436.0	436.0	436.0
2.5°	432.9	434.0	436.0	436.0	437.0
5°	431.9	432.9	435.0	435.0	435.0
7.5°	428.8	429.9	431.9	432.9	432.9
10°	425.8	426.8	428.8	429.9	430.9
12.5°	420.7	421.7	424.8	426.8	426.8
15°	415.6	416.6	419.7	421.7	422.7
17.5°	409.4	411.5	414.6	416.6	417.6
20°	401.3	403.3	407.4	410.5	411.5
22.5°	394.1	396.2	400.3	403.3	405.4
25°	386.0	388.0	394.1	396.2	398.2
27.5°	375.8	377.8	382.9	387.0	390.0
30°	365.5	367.6	373.7	378.8	380.9
32.5°	354.3	357.4	364.5	368.6	371.7
35°	342.1	345.1	352.3	359.4	362.5
37.5°	329.8	332.9	340.0	349.2	353.3
40°	315.5	319.6	328.8	341.0	343.1
42.5°	302.2	307.3	315.5	329.8	334.9
45°	286.9	292.0	303.3	318.6	326.7
47.5°	272.6	277.7	290.0	308.4	318.6
50°	255.3	262.4	277.7	299.2	309.4
52.5°	238.9	245.1	265.5	289.0	301.2
55°	221.6	228.7	253.2	278.8	292.0
57.5°	206.3	212.4	240.0	268.5	283.9
60°	186.9	195.0	226.7	257.3	272.6
62.5°	166.4	178.7	213.4	245.1	261.4
65°	147.0	161.3	201.1	232.8	249.1
67.5°	129.7	145.0	185.8	219.5	234.8
70°	109.3	128.7	170.5	203.2	220.6
72.5°	90.9	112.3	153.2	185.8	201.1
75°	72.5	96.0	135.8	163.4	172.6
77.5°	56.2	78.6	116.4	124.6	125.6
80°	41.9	62.3	86.8	87.8	90.9
82.5°	28.6	43.9	56.2	61.3	62.3
85°	18.4	25.5	31.7	32.7	34.7
87.5°	8.2	9.2	11.2	10.2	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)